

**AMENDMENTS TO THE CLAIMS**

- 1-8. (Canceled)
9. (currently amended) An OX2R-binding compound comprising an antigen binding site from a substantially pure or recombinant antibody, wherein the antibody specifically binds to a polypeptide comprising mature SEQ ID NO:20 or a fragment thereof, wherein the fragment exhibits a functional property of an intact subunit.
10. (Previously presented) The binding compound of claim 9, wherein the binding compound blocks the interaction between OX2 and OX2R.
11. (Previously presented) The binding compound of claim 9, wherein the binding compound is a Fv, Fab, or Fab<sub>2</sub> fragment.
12. (Previously presented) The binding compound of claim 9, wherein the binding compound is conjugated to a chemical moiety.
13. (Previously presented) The binding compound of claim 9, wherein the attached to a solid substrate.
14. (Previously presented) The binding compound of claim 13, wherein the solid substrate is a bead or a plastic membrane.
15. (Previously presented) The binding compound of claim 9, wherein the binding compound binds the polypeptide of SEQ ID NO:20 or a fragment thereof, with a  $K_d$  of at least 30  $\mu$ M.
16. (Previously presented) The binding compound of claim 9, wherein the polypeptide comprising mature SEQ ID NO:20 is a fusion protein.
17. (Previously presented) The binding compound of claim 9, wherein the binding compound is in a sterile composition.

18. (Previously presented) The binding compound of claim 9, wherein the binding compound is labeled with a detectable label.

19. (Previously presented) The binding compound of claim 18, wherein the label is a fluorescent label or a radioactive label.

20. (Previously presented) The binding compound of claim 9, wherein the binding compound binds the polypeptide comprising SEQ ID NO:20 or a fragment thereof when it is denatured.

21. (Previously presented) The binding compound of claim 9, wherein the antibody is a polyclonal antibody.

22. (Previously presented) The binding compound of claim 9, wherein the antibody is raised against a polypeptide comprising SEQ ID NO:20 or some fragment thereof.

23. (Previously presented) A kit comprising:
- a) the binding compound of claim 9;
  - b) a compartment for the binding compound; and
  - c) instructions for use or disposal of reagents in the kit.